

Claims:

1. An aircraft landing gear door assembly including a plurality of doors moveable between open positions, in which 5 landing gear can be deployed through an aperture, and closed positions, in which the doors are closed across the aperture, the plurality of doors including a first door and a second door, wherein

the first and second doors are so arranged that they are, 10 in use, configurable in such a way that movement of one of the first and second doors for at least a part of the way between the open and closed positions causes movement of the other of the first and second doors, and

the first and second doors are arranged such that, when 15 the landing gear is deployed, the second door is obstructed from moving between its open and closed positions while the first door is free to move between its open and closed positions.

2. An assembly according to claim 1, wherein the first and 20 second doors are mounted such that they may be moved together between the open and closed positions substantially without any relative movement between the first and second doors.

3. An assembly according to claim 1 or claim 2, wherein one 25 of the first and second doors is mounted for rotational movement about a fixed axis.

4. An assembly according to any preceding claim, wherein the first and second doors are mounted for rotation about a fixed axis, the fixed axes of rotation of the first and second doors being substantially coincident.

30 5. An assembly according to any preceding claim, wherein the first and second doors are each mounted for movement by means of a connection having a plurality of connection points, at least one of the connection points of one of the first and second doors being disposed between two of the connection points of the other of the first and second doors.

35 6. An assembly according to any preceding claim, in which the first and second doors are arranged so that they may be coupled together to move as a single unit between their open and closed positions, and be decoupled to enable the first

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door also to move independently of the second door between its open and closed positions.

7. An assembly according to any preceding claim, in which, when the doors are in their open positions, the second door is 5 disposed below the first door.

8. An assembly according to claim 7, in which the second door is mounted on at least one arm which is connected to one end to the second door and is moveably mounted at its other end to allow the movement of the second door between its open 10 and closed positions.

9. An assembly according to any preceding claim, in which the plurality of doors includes a third door moveable between closed and open positions, the first and third doors defining a pair of doors on opposite sides of the aperture through 15 which the landing gear is deployed.

10. An assembly according to claim 9, in which the third door is mounted for rotational movement about a fixed axis.

11. An assembly according to claim 9 or 10, in which the third door is arranged such that, when the landing gear is 20 deployed, it is free to move between its open and closed positions.

12. An assembly according to claim 9 or 10, in which the plurality of doors includes a fourth door mounted for movement between closed and open positions, the third and fourth doors 25 being arranged such that, when the landing gear is deployed, the fourth door is obstructed from moving between its open and closed positions while the third door is free to move between its open and closed positions.

13. An assembly according to claim 12, in which the fourth door is mounted for rotational movement about a fixed axis. 30

14. An assembly according to claim 13, when dependent upon claim 9, in which the fixed axes of rotation of the third and fourth doors are substantially coincident.

15. An assembly according to any of claims 12 to 14, in which 35 the third and fourth doors are arranged so that they may be coupled together to move as a single unit between their open and closed positions, and be decoupled to enable the third door also to move independently of the fourth door between its open and closed positions.

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16. An assembly according to any of claims 12 to 15, in which, when the third and fourth doors are in their open positions, the fourth door is disposed below the third door.

17. An assembly according to claim 16, in which the fourth door is mounted on at least one arm which is connected at one end to the second door and is moveably mounted at its other end to allow the movement of the fourth door between its open and closed positions.

18. An aircraft including a landing gear door assembly according to any of the preceding claims and a landing gear with which the landing gear door assembly is associated.

19. A method of operating a landing gear door assembly including a plurality of doors moveable between open positions, in which the doors provide an aperture through which landing gear can be deployed, and closed positions, in which the doors close over the aperture, wherein the plurality of doors include first and second doors and the method includes the following steps:

20. opening the first and second doors, the opening of the doors comprising a step in which the first and second doors are moved together substantially without any relative movement between the first and second doors,

deploying the landing gear; and

25. closing the first door while the landing gear is still deployed.

20. A method according to claim 19, further including the following subsequent steps:

opening the first door;

retracting the landing gear; and

30. closing the first and second doors.

21. A method of operating a landing gear assembly including a plurality of doors moveable between open positions, in which the doors provide an aperture through which landing gear can be deployed, and closed positions, in which the doors close over the aperture, wherein the plurality of doors include first and second doors and the method includes the following steps:

providing the door assembly with the landing gear deployed, the first door closed and the second door open;

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opening the first door;
retracting the landing gear; and
closing the first and second doors, the closing of the
doors comprising a step in which the first and second doors
5 are moved together substantially without any relative movement
between the first and second doors.

22. A method according to claim 21, further including the
following subsequent steps:

opening the first and second doors;
10 deploying the landing gear; and
closing the first door while the landing gear is still
deployed.

23. A method according to any of claims 19 to 22, in which
the plurality of doors includes a third door moveable between
15 closed and open positions, the first and third doors defining
a pair of doors on opposite sides of the aperture through
which the landing gear is deployed, the third door being
opened when the first door is opened and closed when the first
door is closed.

20 24. A method according to claim 23, in which the plurality of
doors includes a fourth door mounted for movement between
closed and open positions, the fourth door being opened when
the second door is opened and closed when the first door is
closed.